

CLAIMS

1. A method of ejecting liquid from a micro-electromechanical device of the type having a nozzle arrangement that defines a nozzle chamber and an actuator that acts on liquid in the nozzle chamber to eject the liquid from the nozzle chamber, the method comprising the step of heating the liquid to a predetermined temperature prior to ejecting the liquid from the nozzle chamber with the actuator.
2. A method as claimed in claim 1, which includes the step of sensing the temperature of the liquid such that a necessary extent of heating of the liquid can be determined.
3. A method as claimed in claim 2, in which the actuator is in the form of a thermal actuator of the type which deflects through the application of an electrical current that resistively heats the actuator, resulting in differential expansion of the actuator and subsequent deflection of the actuator, the step of heating the liquid being carried out by applying an electrical current to the actuator, the electrical current being selected to heat the actuator without deflection.
4. A method as claimed in claim 3, in which the step of heating the actuator without deflection comprises the step of applying a series of electrical heating pulses to the actuator, the heating pulses being smaller than an ejection pulse applied to the actuator to cause deflection of the actuator.
5. A method as claimed in claim 2, which includes the step of monitoring the temperature of the liquid during a printing operation and carrying out the step of heating the liquid to said predetermined temperature in the event that the temperature of the liquid falls below said predetermined value.
6. A method of printing with a printhead chip that has a substrate, drive circuitry positioned on the substrate and a plurality of nozzle arrangements positioned on the substrate, each nozzle arrangement defining a nozzle chamber and having an actuator which acts on ink in the nozzle chamber to eject the ink from the nozzle chamber, the method comprising the steps of:
 - supplying ink to the nozzle chambers;
 - heating the ink to a predetermined temperature; and
 - once the ink has reached said predetermined temperature, applying an electrical current to each actuator so that the actuators can act on the ink in the nozzle chambers to eject the ink from the nozzle chambers.